

Claims

1. Method for the production of a web of insulating material made of mineral fibres, in particular from rock wool and/or glass wool, wherein the mineral fibres are made from a melt and are deposited onto a conveyor as a primary non-woven material, the primary non-woven material is dangled at right angles in relation to the longitudinal extension thereof and is deposited as a secondary non-woven material onto a second conveyor, the secondary non-woven material is then displaced in such a way that the mineral fibres extend at right angles in relation to the large surfaces of the secondary non-woven material and the secondary non-woven material is subsequently divided into at least two webs of insulating material by means of a separating cut parallel to the large surfaces of the secondary non-woven material, said webs of material respectively comprising a large surface and a separating surface which has substantially the same area as the large surface and which is arranged opposite said large surface,  
characterized in  
that a lamination (39) is applied to at least one of the separating surfaces (36) of said two webs of insulating material (2).  
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2. Method according to claim 1,  
characterized in  
that the mineral fibres (3) which in said large surfaces (22, 23) extend substantially parallel to said large surfaces (22, 23) are removed.  
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3. Method according to claim 1,  
characterized in  
that said webs of insulating material (2) are fed to a hardening furnace (30) before and/or after the applying of the lamination (39), in which  
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hardening furnace (30) a bonding agent already contained in the primary non-woven material (10) is hardened.

4. Method according to claim 1,

5 characterized in

that the separating cut for forming the webs of insulating material (2) is made centrally between the said large surfaces (22, 23) of the secondary non-woven material (18).

10 5. Method according to claim 1,

characterized in

that said lamination (39) is applied as an air-permeable and/or heat-resistant non-woven, woven or two-dimensional structure, in particular from glass and/or natural fibres or organic chemical fibres like e.g. from carbon, aramide, terephthalate, polyamide, polypropylene or mixtures thereof or as a foil, for example an aluminium-polyethylene composite foil, and at least in one layer and particularly in the form of tension-resistant webs.

20 6. Method according to claim 1,

characterized in

that the lamination (39) is applied in several layers, said layers of the lamination (39) being preferably formed differently from each other.

25 7. Method according to claim 6,

characterized in

that the layers of the lamination (39) made of a glass fibre tangled web are connected to layers made of tangled webs from thermoplastic fibres and/or perforated foils from thermoplastic materials.

8. Method according to claim 1,  
characterized in  
that said lamination (39) is bonded to the web of insulating material (2),  
wherein said bonding is preferably effected over a partial area, particularly in the form of lines or dots, and wherein for example heat-sealing adhesives are used.
9. Method according to claim 1,  
characterized in  
that said lamination (39) is formed as an external reinforcement, protection, filter and/or decorative layer.
10. Method according to claim 1,  
characterized in  
that said lamination (39) is drawn off a roll (40) and is fed together with the web of insulating material (2) to a processing station (38), where said lamination (39) is connected to said web of insulating material (2).
11. Method according to claim 10,  
characterized in  
that several layers of said lamination (39) are drawn off a roll (40).
12. Method according to claim 1,  
characterized in  
that bonding agents present in said web of insulating material (2) are activated by means of solvents like for example water, prior to being connected to the lamination (39).
13. Method according to claim 12,  
characterized in

that the activation of said bonding agents is effected by means of contact rollers.

14. Method according to claim 1,

5 characterized in

that said bonding agent is sprayed onto the separating surface (36) of the web of insulating material (2), prior to applying the lamination (39).

15. Method according to claim 1,

10 characterized in

that between said web of insulating material (2) and said lamination (39) a layer of an impregnation, particularly made of a highly viscous dispersion binder or a pigment-filled water-silicate synthetic binder is arranged.

15 16. Method according to claim 1,

characterized in

said impregnation is applied at a high viscosity, so that said impregnation is not absorbed by said lamination (39).

20 17. Method according to claim 1,

characterized in

that said two webs of insulating material (2) are brought together after the application of the laminations (39) and together are supplied to a hardening furnace (30).

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18. Method according to claim 17,

characterized in

that said webs of insulating material (2) after leaving said hardening furnace (30) are trimmed in the longitudinal direction thereof, are cut to length and are rolled up or divided into single insulation boards and supplied to a packaging station.

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19. Method according to claim 1,  
characterized in  
that mineral fibre dust occurring during the separation of the secondary  
non-woven material (18) into webs of insulating material (2) are removed  
5 and particularly exhausted prior to the application of the lamination (39).
- 10 20. Method according to claim 5,  
characterized in  
that said foil is reinforced by a two dimensional glass-fibre netting.
- 15 21. Method according to claim 5,  
characterized in  
that said aluminium-polyethylene composite foil is heated in such a way  
that the polyethylene layer is softened and becomes welded to the min-  
eral fibre tips of the web of insulating material (2).
- 20 22. Method according to claim 1,  
characterized in  
that said lamination (39) is formed of different layers.
- 25 23. Method according to claim 1,  
characterized in  
that the lamination (39) is formed larger in area than said separating  
surface (36), so that said lamination (39) projects especially over at least  
one longitudinal side of said web of insulating material (2).
- 30 24. Method according to claim 1,  
characterized in  
that markings are arranged on said lamination (39) which serve for cut-  
ting said web of insulating material (2) to length.

25. Web of insulating material made of mineral fibres bound with at least one bonding agent, particularly from mineral wool and/or glass wool, comprising a large surface and a separating surface that is formed at the division of a secondary non-woven material into two webs of insulating material, wherein said mineral fibres in the region of said separating surface are arranged to extend at right angles to the separating surface and in the region of the surface deviating under an angle of 90° in relation to the large surface, in particular parallel to the large surface, and comprising a lamination,

10 characterized in  
that said lamination (39) is arranged on the separating surface (36).

26. Web of insulating material according to claim 25,  
characterized in  
15 that said lamination (39) is formed as an air-permeable and/or heat-resistant non-woven, woven or two-dimensional structure, in particular from glass and/or natural fibres or organic chemical fibres like e.g. from carbon, aramide, terephthalate, polyamide, polypropylene or mixtures thereof or as a foil, for example an aluminium-polyethylene composite foil, and at least in one layer and particularly in the form of tension-resistant webs.

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27. Web of insulating material according to claim 25,  
characterized in  
25 that said lamination (39) is formed in several layers, with said layers of said lamination being preferably formed differently from each other.

28. Web of insulating material according to claim 25,  
characterized in

that said layers of the lamination (39) made of a glass fibre tangled web are connected to layers made of tangled webs from thermoplastic fibres and/or perforated foils from thermoplastic materials.

5     29. Web of insulating material according to claim 25,  
          characterized in  
          that said lamination (39) is bonded to the web of insulating material (2),  
          wherein said bonding is preferably effected over a partial area, particu-  
10           larly in the form of lines or dots, and for example with a heat-sealing ad-  
          hesive.

15     30. Web of insulating material according to claim 25,  
          characterized in  
          that said lamination (39) is formed as an external reinforcement, protec-  
          tion, filter and/or decorative layer.

20     31. Web of insulating material according to claim 25,  
          characterized in  
          that between said web of insulating material (2) and said lamination (39)  
25           a layer of an impregnation, particularly made of a highly viscous disper-  
          sion binder or a pigment-filled water-silicate synthetic binder is arranged.

30     32. Web of insulating material according to claim 25,  
          characterized in  
          that the impregnation has a high viscosity, so that the impregnation is not  
          absorbed by the lamination (39).

35     33. Web of insulating material according to claim 26,  
          characterized in  
          that the foil is reinforced by a two-dimensional glass-fibre netting.

34. Web of insulating material according to claim 25,

characterized in

that said lamination (39) is formed of different layers.

5 35. Web of insulating material according to claim 25,

characterized in

that said lamination (39) is formed larger in area than said separating surface (36), so that said lamination (39) especially projects over at least one longitudinal side of said web of insulating material (2).

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36. Web of insulating material according to claim 25,

characterized in

that markings are arranged on said lamination (39) which serve for cutting said web of insulating material (2) to length.

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